CENTER OF GRAVITY:
DISPELLING THE MYTHS

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CENTER OF GRAVITY: Dispelling the Myths

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ABSTRACT

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   The term "center of gravity", first coined by the nineteenth
century military strategist, Carl von Clausewitz, seems to be
somewhat misunderstood. In discussions with senior military
officers, you can easily find many different interpretations of
the term. It has tremendous utility when correctly applied to
the planning process, at any level of war. Unless everyone has
the same understanding of the term, you run the risk of
misinterpretations.
   The purpose of this paper was to dispel the myths
surrounding the concept of center of gravity and in the process,
clarify exactly what the term means. The paper analyzes
Clausewitz's meaning of the term center of gravity. Next, it
shows how the concept was applied to a real-world situation
featuring Operation Desert Shield/Storm. Finally, it concludes
by addressing the common misconceptions or myths, associated with
the term.

The term "center of gravity", first coined by the nineteenth century military strategist, Carl von Clausewitz, seems to be somewhat misunderstood. In discussions with senior military officers, you can easily find many different interpretations of the term. As a result, the concept has not reached its full potential and that's unfortunate. It has tremendous utility when correctly applied to the planning process, at any level of war. As Clausewitz stated in his treatise On War, "The first task, then, in planning for any war is to identify the enemy's centers of gravity, and if possible trace them back to a single one."[1] It provides focus for the design of the subsequent campaign. Planners at the highest level must skillfully translate strategic aims, or what is to be accomplished, into tangible actions which result in desired outcomes. The crucial question is always how, when, and where to decisively engage the enemy to achieve the aims for which the campaign is to be fought. The answer is find the enemy's center of gravity and attack it. Unless everyone has the same understanding of the term, you run the risk of misinterpretations. Just like any other doctrinal term, it's critical to avoid confusion and gain a common understanding. The purpose of this paper is to dispel the myths surrounding the concept of center of gravity and in the process, clarify exactly what the term means.

To do this, I'll first analyze Clausewitz's meaning of the term. Next, I'll show how the concept was applied to a real-world situation featuring Operation Desert Shield/Storm.

Finally, I'll conclude by addressing the common misconceptions or myths, associated with the term.

In an article written by James Schneider and Lawrence Izzo in September 1987 titled, "Clausewitz's Elusive Center of Gravity", they do an excellent job of analyzing Clausewitz's meaning of center of gravity.[2] Accordingly, I will use their framework to present my case.

In his book, <u>On War</u>, Clausewitz begins to develop the center of gravity theme early-on by addressing the definition of war in Chapter 1 of Book One as follows:

> *War is nothing but a duel on a larger scale. Countless duels go to make up war, but a picture of it as a whole can be formed by imagining a pair of wrestlers. Each tries through physical force to compel the other to his will; his immediate aim is to throw his opponent in order to make him incapable of further resistance. War is thus an act of force to compel our enemy to do our will.[3]*

Having established the physical nature of war as a collision between armed forces, Clausewitz then gives meaning to the concept of center of gravity. In Chapter 27 of Book Six, in the context of the attacker versus the defender, he discusses this relationship and then introduces the term center of gravity.

> *Since one cannot concentrate land as one can an army, it will be necessary to divide the army to defend the land. ...A division of forces thus becomes inevitable, and with it several theaters of operation. ...For this reason, the blow from which the broadest and most favorable repercussions can be expected will be aimed against that area where the greatest concentration of enemy troops can be found; the larger the force with which the blow is struck, the surer its effect will be. This rather obvious sequence leads us to an analogy that will illustrate it more clearly - that is the nature and effect of center of gravity.*
> *A center of gravity is always found where the mass*

is concentrated most densely. It presents the most
effective target for a blow; furthermore, the heaviest
blow is that struck by the center of gravity. The same
holds true in war. The fighting forces of each
belligerent - whether a single state or an alliance of
states - have a certain unity and therefore some
cohesion. Where there is cohesion, the analogy of the
center of gravity can be applied. Thus these forces
will posses certain centers of gravity, which by their
movement and direction, govern the rest; and those
centers of gravity will be found wherever the forces
are most concentrated.[4]

To summarize the explanation so far, Clausewitz depicted war

as a duel between two opponents who seek to "throw" each other,

"to compel the other to his will." To do this, a blow must be

struck by an attacker. Since defenders rarely have the option of

knowing where this attack might come and thus, concentrate their

forces in one location, they must divide them along likely enemy

avenues of approach. Since the aggressor has the option of

picking which portion of the defense he will attack, he will

concentrate his forces most at that point. His ultimate target,

as Clausewitz points out, should be the defender's center of

gravity, or his greatest concentration of troops. By attacking

them he gains "...the broadest and most favorable

repercussions..."[5] Thus in war, your aim is to orchestrate a

clash between your center of gravity and your opponents, all the

while ensuring that your blow is greater than his.

In Chapter 28 of Book six, Clausewitz resumes the discussion

of centers of gravity by saying:

Even if battle were not the primary, the most common,
the most effective means of reaching a decision...it
should be enough to call for the utmost possible
concentration of strength permissible under the
circumstances.[6]

Clausewitz clearly points out the virtues of the principle of

mass as it relates to war.

FM 100-5 defines mass as:

> ...the effects of overwhelming combat power at the
> decisive place and time. ...Synchronizing all the
> elements of combat power where they will have decisive
> effect on an enemy force in a short period of time is
> to achieve mass. To mass is to hit the enemy with a
> closed fist, not poke at him with fingers of a closed
> hand.[7]

So when Clausewitz states:

> A major battle in a theater of operations is a
> collision between two centers of gravity; the more
> forces we can concentrate on our center of gravity, the
> more certain and massive the effect will be.
> Consequently, any partial use of force not directed
> toward an objective that either cannot be obtained by
> the victory itself or that does not bring about the
> victory should be condemned.[8]

he is clearly addressing the principle of war we call mass.

Clausewitz continues his discussion of centers of gravity by

distinguishing between those things he considers centers and

those he does not. For example, Joint Pub 3-0 says that "Long

sea and air LOCs from CONUS or supporting theaters can represent

a center of gravity."[9] According to Clausewitz, this is not

correct.

> Operating against the enemy's lines of communication
> promises...some benefits...it (but) seldom leads to a
> decision that we have assumed to be the object of the
> campaign. ...the effects of an action against them are
> too gradual to delay seriously the execution of the
> enemy's plans. ...In most cases, therefore, an action
> against lines of communications will be totally
> ineffective if the enemy is bent on gaining a
> decision.[10]

In other words, LOCs are not centers of gravity but possibly an

objective along the path of destroying the actual center of

gravity.

In Chapter 4 of Book Eight, Clausewitz finally uses the definition of center of gravity that most military experts are familiar with:

> ...one must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain center of gravity develops, the hub of all power and movement, on which everything depends. That is the point at which all our energies should be directed.[11]

Up to this point, Clausewitz has kept his discussion of center of gravity at the tactical and operational level. It is at this point, that he elevates it to the strategic level of war and it is also here that much of the confusion surrounding the term enters. At the strategic level, Clausewitz cites possible centers of gravity:

> In countries subject to domestic strife, the center of gravity is generally the capital. In small countries that rely on large ones, it is usually the army of their protector. Among alliances, it lies in the community of interest, and in popular uprising it is the personalities of the leaders and public opinion. It is against these that our energies should be directed.[12]

As you follow the discussion of center of gravity through On War, it appears that Clausewitz's commentary on centers of gravity at the strategic level was an afterthought; one not fully developed. Interestingly, after addressing centers of gravity at the strategic level, he quickly brings the discussion back from the "psychological realm of personalities and public opinion... (to) its proper physical domain"[13] in the next paragraph by asserting:

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Still, no matter what the central feature of the enemy's power may be - the point on which your efforts must converge - the defeat and destruction of his fighting force remains the best way to begin, and in every case will be a very significant feature of the campaign.[14]

Regardless, modern military experts have embraced the concept at the strategic level of war. The key is that centers of gravity exist at each level of war and making this distinction helps to eliminate much of the confusion.

At the operational level of war, Clausewitz is talking about concentrating forces. At the strategic level, he is talking about much more than just the military's contribution. Joint Pub 3-0 states that "strategy is the art and science of developing and employing armed forces and <u>other</u> instruments of national power in a synchronized fashion to secure national or multinational objectives."[15] When determining an opponents center of gravity at the strategic level, you must look at the nation's dominant characteristics to find the center of gravity. Once determined, you then figure out how best to attack it. That may be economically, politically or militarily. If you decide to use military force to defeat the strategic center of gravity, then operational and tactical centers of gravity are selected to compliment the "take down" of the strategic center. Too often, we don't start at the top with the strategic center and work down from there. We tend to select one center of gravity for the entire operation - usually the army, which is only one aspect of national power. In many cases, the army is not applicable. For example, the erosion of public confidence in the Russian

government led to its collapse in 1917 well before the central powers had destroyed the Czar's armies. In 1939, Hitler utilized the political strategy of undermining and destroying Czechoslovakian resistance by threats and subversion long before military action could ever be thought of. During the "Cold War", the center of gravity of East European nations was not their armies, but the strengths of the Soviet army and the solidarity of the Warsaw Pact alliance. Finally, Japan's center is certainly not its army. U.S. defense guarantees and Japan's economic might are more appropriate.[16] Once again, the army is not always the most dominant characteristic at the national level. There may be something else such as public opinion or economic might as described above. The key is, find it and work down from there. This rule will help clarify the process.

Furthermore, it is not necessary to destroy, in the classic sense of the word, an opponent's center of gravity to be successful. You only have to impact on it to the degree that your objectives or aims are met. Clausewitz addresses the meaning of the term "defeat" by stating:

> *But what exactly does "defeat" signify? The conquest of the whole of the enemy's territory is not always necessary.*[17]

He goes on to cite historical examples of what he means by that. The point he makes is an important one. The meaning of defeat must be consistent with your objectives. Going back to the earlier discussion on force of wills, Clausewitz says "war is thus an act to compel our enemy to do our will." If our will is

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limited, in other words, our objectives are limited; then total destruction of the enemy is not necessary. For example, economic sanctions may, in fact, defeat the enemy and bend him to our will. Political and diplomatic efforts may bring about the desired effect. Destruction of his army may also be the answer. But in each case, you first determined what is most important to him before developing a strategy to impact on it.

To illustrate this, I'll use a historical example from Operation Desert Shield/Storm. As the situation unfolded in August 1990, the U.S.'s strategic aims were to deter further Iraqi aggression, improve the Saudi Arabian military capability and defend Saudi Arabia. With these strategic aims as the foundation, the Iraqi strategic center of gravity may have been their command and control, specifically the Iraqi national command authority consisting of Saddam Hussein, the Bathist leadership and their communications hardware. At the operational level, the center of gravity may have been the Republican Guard. In short, it was the will of the Iraqi leadership and the mobile combat power of the Republican Guard that could be employed to achieve Iraq's aims and prevent U.S. forces from succeeding. By November, the original set of aims had been met, but the situation now changed. The U.S. led coalition force had shifted its strategic aims to ejecting Iraqi forces from Kuwait and reestablishing sovereignty of the Kuwait government. The list of strategic aims had grown, but the centers of gravity remained constant. At both levels, defeating

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both these centers of gravity would have the desired effect. Accordingly, Air Force and Naval forces were used to isolate Kuwait and sever Saddam's command and control capability. Furthermore, ground forces enveloped and destroyed the operational center of gravity, the Republican Guard. Both centers of gravity were attacked simultaneously and, as a result, the operation was incredibly successful.[18]

To quickly summarize, Clausewitz states that the most favorable repercussion can be expected by finding and destroying your opponents center of gravity. In selecting the center of gravity, you must keep the dominant characteristics of your opponent in mind and find his hub of all power and movement, on which he depends. This must be done at each level of war, the strategic, operational and tactical. Once determined, direct all your energies against that point.

Now let's turn our attention to dispelling some of the myths that surround the concept of center of gravity. During my year as a student at the United States Army War College, I was exposed to many different interpretations of the concept during class discussions by military professionals with varied backgrounds. Accordingly, I will address the myths that I heard expressed:

1. Using the "House of Cards" analogy, the idea that if one card is removed, the rest of the house will crumble is not true. When you apply this to the center of gravity concept, neh sayers would argue that there in not one card, but many that must be removed to bring down the house. Not true; by removing the

center of gravity, you remove the hub of all power and movement.
Albeit, there may be other important capabilities left, but the
most important one is gone. What does he have left to resist
with? Your best has beaten his best. For example, when the
South lost the Army of Northern Virginia during the Civil War,
they still had the means to resist but <u>not</u> effectively. They
lost the will to resist when General Lee surrendered and their
house of cards quickly fell. Joint Pub 3-0 sums this up nicely
by stating "... destruction or neutralization of enemy centers of
gravity is the most direct path to victory."[19] By eliminating
anything less, you squander your combat power on objectives that
may not contribute to success. When Clausewitz wrote:

> ... *no conquest can be carried out too quickly, and*
> *that to spread it over a longer period than the minimum*
> *needed to complete it makes it not less difficult, but*
> *more.*[20]

he had this is mind.

   2. There is more than one center of gravity at any time.
The response to this is both yes and no. Yes, there are more
than one in any campaign, but as discussed above, they exist at
each level of war. The strategic, operational and tactical
levels will all have a center of gravity that will compliment the
others. For example, at the strategic level, the center of
gravity may be the country's ability to ship its oil overseas to
foreign markets. Therefore, the military is assigned the mission
of placing an embargo on that country. The operational center of
gravity for the military may be the containment or destruction of
the navy and the tactical center of gravity may be a specific

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ship. This is a concocted example but it shows that at each
level of war, there is a center of gravity, a hub of all power
and movement, that if taken away, is the most direct path to
victory.

The confusion over number stems from a logical argument.
That is, there are a lot of capabilities or power centers that
must be dealt with; picking one does not seem adequate. But by
picking more than one at each level, you dilute the utility of
the concept. Joint Pub 3-0 correctly describes the concept of
center of gravity as an analytical tool...to assist commanders
and staffs in analyzing friendly and enemy sources of strength as
well as weaknesses and vulnerabilities.[21] It focuses the efforts
of planners on what is vital and what is only important; more
precisely, what contributes directly to victory, and what does
not. Having more than one clearly violates clarity of effort and
unity of purpose, and waters down the effects of combat power.
Clearly, the concept is most useful when you concentrate on a
single aspect of your foe.

Another pitfall occurs when decisive points are mistaken for
centers of gravity just because they are worthy of being
attacked. Joint Pub 3-0 describes decisive points as keys to
attacking protected centers of gravity.[22] Resources are
allocated to control, destroy or neutralize them thereby enabling
the eventual attack of the enemy's center of gravity. They are
usually geographic in nature such as constricted sea lanes, a
hill, a town or an air base. They can also include other

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elements such as a command post, critical boundaries, air space or communications nodes. Clausewitz understood the importance of the decisive point by stating:

> *Strategy decides the time when, the place where, and the forces with which the engagement is to be fought, and through this threefold activity exerts considerable influence on its outcome. ...It thus follows that as many troops as possible should be brought into the engagement at the decisive point. ...We believe then that in our circumstances and all similar ones, a main factor is the possession of strength at the really vital point. ...Consequently, the forces available must be employed with such skill that even in the absence of absolute superiority, relative superiority is attained at the decisive point. To achieve this, the calculation of space and time appears as the most essential factor.*[23]

As you can see, the concepts of center of gravity and decisive points are intimately linked and consequently, are frequently mistaken for each other. Once the center of gravity is determined, decisive points are identified and targeted as objectives. The taking of these objectives then becomes the critical path to the ultimate downfall of the center of gravity.

Again, to eliminate a center of gravity you must establish physical objectives that you are willing to expend combat power on as well as other elements of national power. These objectives or points are decisive only in relation to the center of gravity. The seizure of a decisive point must somehow attack or threaten, directly or indirectly, the enemy center of gravity. The retention of decisive points must somehow defend or protect, directly or indirectly, the friendly center of gravity.

Heinz Guderian, perhaps more than anyone else in the German Army, fully understood the principle of attacking at the decisive

point. During the May, 1940 German advance across France, he saw only <u>one</u> operational center of gravity, the main enemy force, and always sought to unhinge or unbalance it by seeking a decisive point. In his case, the decisive point was the French city of Sedan. It marked the southern terminus of the French northern army, their center of gravity. In attacking it, Guderian achieved success through the maximum concentration of his own forces at the decisive point as Clausewitz pointed out. Although there were sufficient French troops in the vicinity of Sedan, they were not concentrated in space and time to adequately defend the decisive point. Guderian moved dispersed, swarmed at the decisive point, and created a center of gravity before the enemy could react. In doing so, he enveloped and cut-off the French center of gravity, their northern army, which quickly led to the country's defeat.[24]

Furthermore, it is not necessary to attack the center of gravity head-on. Our doctrine allows that if your combat power is so overwhelming, you may chose to do this. But in most cases, you'll prefer to find a flank or weakness that can be exploited to more easily and with less loss of life, defeat the enemy. A prime example of this occurred in the Arab - Israeli War of 1973. After the Egyptians attacked across the canal, they quickly established a lodgement to repel expected Israeli counterattacks. There was some give and take on both sides but eventually the Sinai front was stabilized. At that point, the Israelis took the initiative. They attacked along the boundary of the Egyptian

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Second and Third Armies, crossed the canal and destroyed the SAM sites on the west bank. During the subsequent exploitation phase, they encircled the Third Army which was in-part, the operational center of gravity for the Egyptians. In doing so, they took an indirect approach vice a direct one, because the Egyptian center of gravity was too strong to be attacked frontally.[25] This leads me to the third myth.

3. A center of gravity is a weakness, not a strength. If there are weaknesses and they are vulnerable to attack, they will only be relevant if the exploitation of the weakness helps in destroying the enemy's center of gravity and leads to victory. Obtaining tactical successes without an overall strategy to destroy the center of gravity leads to naught. Harry Summers, in his book, On Strategy: The Viet Nam War in Context, expresses this well when he wrote:

> On the battlefield itself, the army was unbeatable. In engagement after engagement, the forces of the Viet Cong and of the North Vietnamese Army were thrown back with terrible losses. Yet, in the end, it was North Viet Nam, not the United States, that emerged victorious.[26]

Winning on the battlefield doesn't necessarily mean you are winning the war; something we never understood in Viet Nam. When an American colonel boasted of never loosing a fight to the enemy during a conversation in Hanoi, April 1975, a North Vietnamese colonel responded with, "That may be so, but it is also irrelevant."[27] In retrospect, we clearly did not attack likely North Vietnamese centers of gravity such as their army, Hanoi, their leadership or their relationship with their allies.

Instead, we focused on the Viet Cong, an important strength, but not a center of gravity.[28] Consequently, we did not defeat their will. Once again, it is absolutely essential that friendly combat power not be wasted in attacking enemy vulnerabilities for the sake of simply gaining the initiative or achieving tactical success. In other words, only attack weakness as part of your overall plan to neutralize or destroy the enemy's center of gravity.

4. Centers of gravity do not change over time. At the strategic level, this is true. The enemy's source of power and strength does not change; it is derived from the nation's dominant characteristics which in most cases, have evolved over many years. Therefore, it would remain fixed throughout the duration of the conflict unless it was eliminated or removed.[29]

This is not true at the operational level. They change routinely during the different phases of a campaign when the concentration of forces relocate or reconfigure. For example, an operation which requires a significant movement by sea, a posturing off-shore and finally a ground campaign exemplifies this. As local security and a lodgment in theater are established, the aircraft carriers or where forces are most concentrated, might initially be considered as the center of gravity. Neutralize or destroy them, and the means to gain a foot-hold is lost. This was the case during the 1982 British venture to retake the Falkland Islands. Initially, the carriers were critical in the build-up. However, once the ground forces

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were ashore in sufficient numbers, the ground forces became the hub of power and movement.[30]

Another example of this might be the U.S. deployment to Southwest Asia and the subsequent fight. Initially, the U.S. had to deploy its equipment and troops to the Gulf and establish a lodgement. During this phase of the campaign, the U.S. was highly vulnerable to chemical attack since personnel and equipment were concentrated in only several locations. A chemically tipped SCUD missile easily had the bursting radius to do wide-scale damage on these concentrations. Saddam's chemical weapons could have caused extensive damage to ports and lodgement areas as well as adversely affect public opinion and resolve back home. At this point, NBC capabilities were a significant source of Saddam's strength and perhaps, his center of gravity. However, once units were dispersed and the ground war started, the operational center of gravity moved to the Republican Guard. They were the only force that had the mass and mobility to affect the battle for the Iraqis. Other forces were important, but as discussed above, they could not swarm to create a center of gravity faster than the U.S. Only the Republican Guard had this capability and once removed, the house of cards fell.

5. **It matters if you are not capable or willing of imposing your will on the selected center of gravity.** This is the final myth that I will dispel in this paper. At the strategic level, the response is no. The enemy's source of power and strength does not change just because you are not willing or

capable of imposing your will upon it.[31]

On the other hand, at the operational level, the answer is
yes. The center of gravity must be capable of being successfully
attacked, either directly or indirectly. Lacking the ability to
impose your will over a valid center of gravity requires an
adjustment of aims or a change in timing. Aims and centers of
gravity are interrelated; as one changes, so might the other.
This relationship requires constant reevaluation as one or both
change. Furthermore, as a force transitions or phases from one
operation to another, their center of gravity may be more
vulnerable to attack.

A classic example of this occurred during the 1941 defense
of the Philippines at the beginning of World War II. From
September through November 1941, every effort was made to
strengthen the U.S. forces in the Philippine Islands in hopes of
deterring invasion by Japan. Recognizing the limited resources
available, the fundamental aim of War Plan Orange was to delay
the Japanese capture of Luzon for six months by conducting a
withdrawal into the Bataan Peninsula to retain control of Manilla
Bay. This would give the U.S. Navy time to fight its way back to
the Philippines with reinforcements. With this end state in
mind, potential centers of gravity could have been the Japanese
naval invasion force, the main landing force and finally the
ground force once they were ashore. So which was the single
center of gravity that would have served best as the focal point
of McArthur's campaign? The Japanese ground force constituted a

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center of gravity that met the feasibility test. Focusing his campaign on that was well within his reach. On the other hand, the naval invasion force and main landing force were potentially valid centers of gravity. The problem with these, however, was that McArthur did not have the ability to impose his will on these sources of strength. He did not have adequate naval assets and numbers of personnel to accomplish the mission. As it turned out, Washington with McArthur's concurrence, deviated from War Plan Orange and elevated the strategic aims to countering the invasion force by defending all of the Philippine Islands based on over-optimistic projections of additional men and equipment. No doubt, imposing his will over this force would have resulted in the achievement of his aims; however McArthur never attained the ability to do so. Consequently, based on the success of the main Japanese landing force on 22 December 1941, he was forced to reorient his efforts on the ground force, or the original center of gravity. Since many on the island were familiar with this plan, it was somewhat successful. In the end, U.S. forces tied up the Japanese ground force for four of the required six months. The question remains, what might have happened given continuous focus on an appropriate and attainable center of gravity?[32]

6. Our doctrinal manuals do not contain a method for determining the center of gravity. That's true. They do address the concept in some detail but do not give a line-by-line system for correctly determining one. However, William Mendel and Lamar Tooke in their article, "Operational Logic: Selecting the Center

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of Gravity", do provide a model for selecting an operational center of gravity as follows:[33]
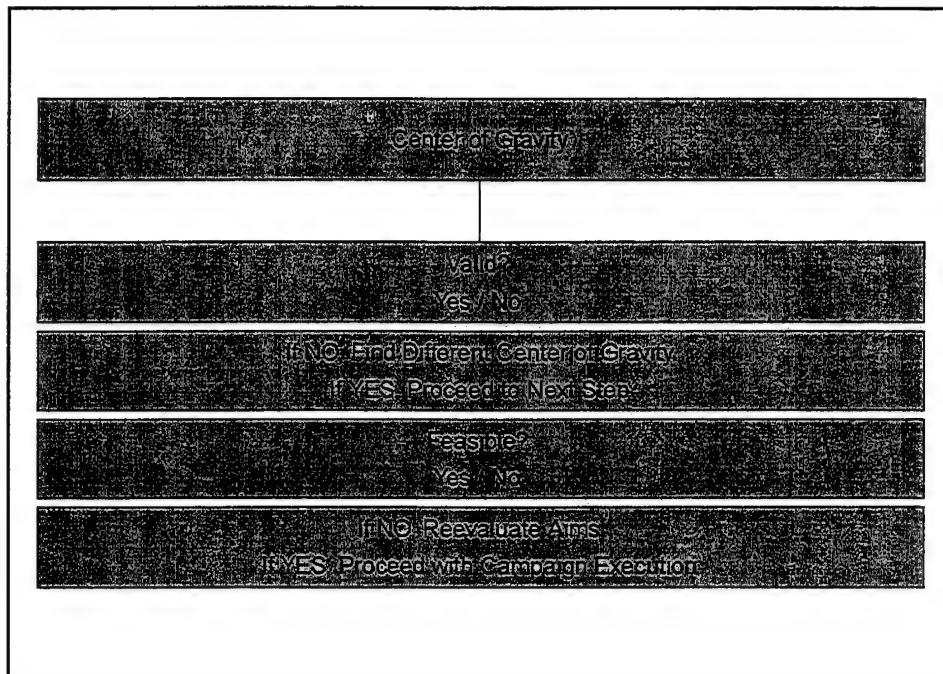
As you can see, you must first submit each potential center of gravity to a validity teat by asking: Can imposing my will over the selected center of gravity create the cascading, deteriorating effect on moral, cohesion and will to fight that prevents my enemy from achieving his goals and allows me to achieve mine? If the answer is no, then find another center of gravity. If the answer is yes, then conduct the next test for feasibility by asking: Do I have the ability to impose my will over it? If this answer is yes, proceed with campaign planning. If the answer is no as we saw in the above example of the Philippines, adjust your aims or timing and reevaluate your

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center of gravity. Remember, a strategic center of gravity is fixed, so this model will not apply.

The above model is not a panacea, but it does offer a solid framework for systematically pursuing the selection of an operational center of gravity. Given that, you're well on your way to providing the necessary and essential planning focus to your campaign. Joint Pub 3-0 put it best when they called the center of gravity concept an analytical tool to assist commanders in designing campaigns and operations.[34] It's a process that must be religiously and properly followed in order to get the maximum effect. The process is clearly the most important thing. A great deal of thinking and discussing are required before a center of gravity can be identified with any confidence. As you can see, if it's not fully understood or correctly applied, the benefits are greatly reduced, and military power and lives may be wasted or lost needlessly.

Clausewitz succinctly conveys his true feelings on the importance of centers of gravity.

> *If the enemy is thrown off balance, he must not be given time to recover. Blow after blow must be aimed in the same direction: the victor, in other words, must strike with all his strength and not just against the fraction of the enemy's. Not by taking things the easy way - using superior strength to filch some province, preferring the security of this minor conquest to great success - but by constantly seeking out the center of his power, by daring all to win all, will one really defeat the enemy.[35]*

In summary, there are many myths and misinformation surrounding the term center of gravity. Consequently, this has prompted several prominent military experts to write extensively

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on the theme. The latest of which is a pamphlet published by the Center for Strategic Studies titled, <u>Center of Gravity:</u> <u>Determination, Analysis and Application</u> which does a good job of describing and defining the term.[36] Because of the tremendous utility of the concept, it has rightfully received much emphasis. Unfortunately, until everyone shares a common understanding, it will never reach it's true potential.

ENDNOTES

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4. Ibid., 485.

5. Ibid.

6. Ibid.,489.

7. Department of the Army, <u>Operations</u>, Army Field Manual 100-5 (Washington: U.S. Department of the Army, June 1993),2-4.

8. Clausewitz, 489.

9. Department of Defense, <u>Doctrine for Joint Operations</u>, Joint Pub 3-0 (Washington: U.S. Department of Defense, 1 February 1995), III-21.

10. Clausewitz, 491.

11. Ibid., 595-596.

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13. Schneider and Izzo, 50.

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17. Clausewitz, 595.

18. William W. Mendel and Lamar Tooke, "Operational Logic: Selecting the Center of Gravity," <u>Military Review</u> 6 (June 1993): 9-11.

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22. Ibid., III-21.

23. Clausewitz, 194-196.

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